**Scientific Method Lab   (Tissue Box Project)                DUE:**

You will conduct a scientific experiment **at home**.  The results of your experiment will be displayed on a (full) tissue box.  You can be as creative as you choose to be with the decoration of the box. The following items need to be clearly labeled:

1.     **Title** – brief description of your experiment

2.     **Hypothesis** – what you think is going to happen [If more sugar is added, the bread will rise higher.]

3.     **Experiment** – describe how you tested your hypothesis

4.     **Independent Variable** – what you controlled in experiment [25 g, 50 g and 100 g of sugar in experiment]

5.     **Dependent Variable** – what you measured in experiment [the measurement or size of the bread each time]

6.     **Results/Data** – record of your observations/measurements

7.     **Conclusion** – was your hypothesis correct?

**Some possible topics for your project:**

* Does the swing of the pendulum take longer for an object of greater mass?
* Does the length of the string affect how fast a pendulum swings?
* Does the color of food or drinks affect whether or not we like them?
* Which kind of foods do dogs (or any animal) prefer best? *(parental permission required)*
* Which paper towel brand is the strongest?
* What is the best way to keep an ice cube from melting?
* How effective are child-proof containers and locks.
* Can background noise levels affect how well we concentrate?
* Do athletic students have better lung capacity?
* What brand of battery lasts the longest?
* Does the color of hair affect how much static electricity it can carry?
* How much mass can the surface tension of water hold?
* Which soda decays teeth the fastest? (use eggshells as an alternative to teeth)
* Does the color of birdseed affect how much birds will eat it?  *(parental permission required)*
* Can people tell artificial smells from real ones?
* Does age affect human reaction times?
* What is the effect of salt on the boiling temperature of water?
* Does shoe design really affect an athlete's jumping height?
* Which bat hits a baseball farther, an aluminum or wooden bat?
* Which material heats up faster - soil or water?  Which one holds on to heat the longest?

\*\***For extra points**: On a separate sheet of paper you can graph your independent and dependent variable. **Hint:** The independent variable goes on the x axis. The dependent variable goes on the y axis.

Rubric

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| --- | --- | --- | --- | --- | --- |
| **Points** | **0** | **1** | **2** | **3** | **4** |
| Project Completion | None of the components were on the project. | At least 2 components are on the project. | At least 3 components are on the project. | At least 5 components are on the project. | All 7 components are on the project. |
| Organization | The project was **unable to follow**. Was unable to read. | The project was **very difficult to follow**. Was very hard to read. | The project was **difficult** **to follow**. Was hard to read. | The project presented **some difficulty** in following. Was moderately hard to read. | The project is neat, **easy to follow** and read. |
| Accuracy and Understanding | The project showed **no understanding** of the components of the scientific method. | The project showed **very little understanding** of the components of the scientific method. | The project showed **little understanding** of the components of the scientific method. | The project showed **some understanding** of the component of the scientific method. | The project showed the **student understood** the components of the scientific method |
| Timeliness | The project was **more than 3 days late**. | The project was 3 days late. | The project was 2 days late. | The project was 1 day late. | The project was **on time**. |
| Rubric | The rubric was **not turned in** with the project. |  |  |  | The rubric was **turned in** with the project. |